CLAIMS

What is claimed as the invention is:

1. A digital recording system comprising:

a video recording device to receive and encode video image data;

a video recorder object which controls and monitors operations of the video recording device;

a first memory for receiving image data from the video recording device;

a streaming object operative to stream the image data from the first memory to a digital storage device.

2. The digital recording system of claim 1 wherein image data is streamed to the digital storage device by the streaming object in the order in which the image data was received by the first memory.

3. The digital recording system of claim 1 wherein initial image data received by the first memory from the video recorder is streamed to the digital storage device by the streaming object while subsequent acquired image data is received by the first memory from the video recorder.

4. The digital recording system of claim 1 wherein image data is received by the first memory during a streaming buffer delay during which image data is not streamed to the digital storage device.

5. The digital recording system of claim 1 wherein image data is streamed to the digital storage device by the streaming object while the first memory is not receiving image data from the video recorder.

6. The digital recording system of claim 1 wherein the image data is received by the first memory as data blocks.

7. The digital recording system of claim 6 wherein the data blocks are encoded video frames.

8. The digital recording system of claim 1 wherein the streaming object is operative to check available storage space in the digital storage device prior to streaming image data to the digital storage device.

9. The digital recording system of claim 1 wherein the video recorder captures image data as one or more standards consisting of the group of MPEG-2, MPEG-4, WMV, and digital video.

10. The digital recording system of claim 1 further comprising a memory controller to control the recording of image data in the first memory.

11. The digital recording system of claim 1, wherein the first memory comprises random access memory.

12. The digital recording system of claim 1 wherein the first memory comprises a hard disk.

13. The digital recording system of claim 6 wherein the hard disk has a minimum rotational speed of 7200 RPM and a minimum bus speed of 100MByte per second.

14. The digital recording system of claim, 1 wherein the digital storage device is an optical storage device.

15. The digital recording system of claim 14 wherein the optical recording device is one of a compact disk (CD) storage device and a digital video disk (DVD) storage device.

16. The digital recording system of claim 1, wherein the digital storage device is one of a network and network connected storage device.

17. The digital recording system of claim 1 wherein the streaming object is embodied in software.

18. The digital recording system of claim 1, wherein the streaming object is embodied in firmware.

19. A digital recording system, comprising:

a video recorder for recording image data;

a first memory for receiving image data from the video recorder;

a streaming object operative to monitor the first memory for storing the image data recorded by the video recorder, and to stream the image data from the first memory to a digital storage device after a streaming buffer delay.

20. The digital recording system of claim 19 wherein the streaming buffer delay is a minimum number of image data blocks of image data stored in the first memory.

21. The digital recording system of claim 19 wherein the streaming object is operative to stream image data to the digital storage device while the first memory receives image data from the video recorder.

22. The digital recording system of claim 19 wherein the first memory receives image data from the video recording during a streaming buffer delay.

23. The digital recording system of claim 19 wherein the first memory is a hard disk having a minimum rotational speed of 7200 RPM and a minimum bus speed of 100 MByte per second, and image data is stored as an encoded video file on the hard disk.

24. The digital recording system of claim 19 wherein the digital storage device is one of the group consisting of a compact disk (CD) storage device and a digital video disk (DVD) storage device.

25. The digital recording system of claim 19, wherein the streaming object is embodied in software, firmware or both.

26. The digital recording system of claim 19 wherein the digital storage device is at least one of a network, a hard disk, or random access memory.

27. The digital recording system of claim 19 wherein image data is stored in the first as data blocks of encoded video frame in an order received from the video recorder.

28. The digital recording system of claim 19 wherein the streaming object streams image data to the digital storage device in an order in which the image data was stored in the first memory.

29. The digital recording system of claim 19 wherein the streaming object is operative to check available storage space in the digital storage device prior to streaming image data from the first memory to the digital storage device.

30. A method for producing digital image video comprising the steps of:

recording image data by one or more recording devices controlled by a video recorder object;

storing recorded image data to a first memory;

monitoring the first memory with a streaming object which also controls

streaming the image data to a digital storage device; and

writing the streaming image data to a recordable data storage medium in the digital storage device.

31. The method of claim 30 further comprising the step of formatting recorded image data to a compressed digital format.

32. The method of claim 30 further comprising the step of transcoding the recorded image data from one compressed format to another.

33. The method of claim 30 further comprising the step of waiting for a streaming buffer delay period before writing the image data to recordable data storage medium in the digital storage device.

34. The method of claim 30 further comprising the step of verifying that the digital storage device includes a recordable data storage medium prior to streaming image data to the digital storage device.

35. The method of claim 30 further comprising the step of sending visual and audible notification to a user if a problem is with the digital storage device is detected by the streaming object.

36. The method of claim 30 further comprising the step of determining whether the recordable data storage medium is a compact disk (CD) or a digital video disk (DVD), and notifying a user accordingly.

37. The method of claim 30 further comprising the step of formatting the recordable data storage medium.

38. The method of claim 37 further comprising the step of determining a format state of the recordable data storage medium if the recordable data storage medium is determined to be a digital video disk, and streaming image data if the recordable data storage medium is pre-formatted.

39. The method of claim 30 further comprising the step of verifying that there is enough free space available on the recordable data storage medium for saving image data.

40. The method of claim 30 further comprising the step of stopping recording image data when the recordable data storage medium in the digital storage device is filled to capacity.

41. The method of claim 40 further comprising the step of generating a notification when the recordable data storage medium in the recording device is full.

42. The method of claim 20 further comprising the step of storing recorded image data to the first memory while streaming image data to the digital storage device.

43. A computer-readable medium of instructions, comprising

means for recording and formatting digital image data;

means for storing captured digital image data in a first memory;

means for monitoring the first memory with a streaming object, the streaming object producing streaming data; and

means for writing the streaming data to an optical recording device to be written onto an optical data storage medium by the optical storage device.

44. The computer-readable medium of instructions of claim 43 wherein the means for recording further comprises means for encoding the digital image data.

45. The computer-readable medium of instructions of claim 43, wherein the streaming object comprises means for creating a streaming buffer delay before producing the streaming data for writing by the optical storage device.

46. A system for capturing a digital record of a surgical procedure, the system comprising:

a video recorder for recording digital image information of a surgical procedure;

a video recorder object for controlling digital image data acquisition functions of the video recorder;

a first memory operative to receive and hold the digital image information recorded by the video recorder, and

a streaming object which controls transfer of the digital image information from the first memory to a digital storage device.

47. The system of claim 46 operative to stream digital image data to the digital storage device from the first memory while additional digital image data is received by the first memory.

48. The system of claim 46 operative to hold digital image information in the first memory during a streaming buffer delay before transfer to the digital storage device.

49. The system of claim 46 operative to receive additional digital image information in the first memory during a streaming buffer delay controlled by the streaming object.

50. The system of claim 46 operative to receive additional digital image information in the first memory while previous digital image information received and held by the first memory is transferred to the digital storage device by the streaming object.

51. The system of claim 46 wherein the first memory is a computer hard disk.

52. The system of claim 46 wherein the digital storage device comprises optically recordable storage medium for producing a digital record of a surgical procedure.